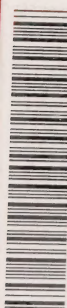


# GET FIT- KEEP FIT

A PHYSICAL FITNESS GUIDE  
FOR MEN & WOMEN

A publication of the Department of National Health and Welfare, Canada.

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# GET FIT - KEEP FIT

Prepared by the Special Committee of  
The Canadian Medical Association and  
The Canadian Association for Health,  
Physical Education and Recreation in  
co-operation with the Fitness and  
Amateur Sport Directorate, Department  
of National Health and Welfare.

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## FOREWORD

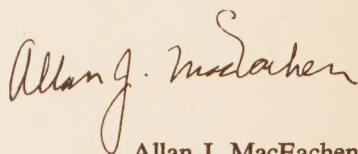
This booklet, a reprint of a runaway best seller, has been prepared by the special committee of the Canadian Medical Association and the Canadian Association for Health, Physical Education and Recreation in co-operation with the Fitness and Amateur Sport Directorate of my department.

For the past several years members of this special joint committee have been concerned with the subject of "physical fitness". Their activities have led to the writing and publication of this booklet. Its object is to encourage adults to develop active physical and recreational programs for themselves and their families.

People feel healthier, and are healthier, when they have learned to balance work activities with wholesome recreation. Many have experienced this state of well-being and as a result have benefited at home, at work and at play.

The department appreciates the work done by Dr. Michael Yuhasz, of the University of Western Ontario's Department of Physical, Health and Recreation Education who prepared the original manuscript for the booklet.

In presenting this booklet the Canadian Medical Association and the Canadian Association for Health, Physical Education and Recreation fully endorse a well planned activity program as an aid to fitness. The choice and extent of the activity, however, will vary with each individual. Fitness is a personal responsibility, but your doctor can help you identify your needs and limitations. Accept your responsibility and "Get Fit — Keep Fit".



Allan J. MacEachen  
Minister

National Health and Welfare



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## WHAT IS PHYSICAL FITNESS?



## WHY SHOULD PHYSICAL FITNESS BE OF CONCERN TO ADULTS?

Physical Fitness is a term that refers to how well you look and how well you perform physically. How well you look depends on your body posture, body build and body fat. Your physical performance is determined by your stamina, your strength, your agility and poise, and the control that you have over your body.

Physical Fitness is not a simple thing. It depends on hereditary factors, nutritional habits and how active you are physically. It varies considerably among individuals and within the same individual at different times in his life. Your physical fitness is also affected by a number of factors such as: disease, health habits, rest, and relaxation.

Frequently standards of physical fitness are set for specific occupations and work or sports. Astronauts and Olympic athletes, for example, must maintain an extremely high level of physical fitness in order to perform their required activities at their best. In the same way, a factory worker or white collar worker will work more effectively with a clear mind and less fatigue if he is physically fit. This is just as true for the housewife in the work that she has to do.

If your level of fitness is high enough you can enjoy your work and have enough left over to enjoy active leisure.

Living today in the time-saving, effort-conserving, push-button type of existence is vastly different from a generation ago. We eat mushy food, ride on balloon tires while sitting on two inches of foam rubber and two inches of flabby fat. Lack of physical activity has made us 'soft'. And, with all this, our working day has been shortened. We have more time for leisure pursuits — more time to be active.

Your life as an adult differs appreciably from that of a youth. As a youth you were guided by



## HOW DOES PHYSICAL ACTIVITY IMPROVE PHYSICAL FITNESS?

parents, teachers and physical educators in the choice of play activities that were valuable to your growth. As an adult you are expected to fend for yourself. Look at yourself. More than likely your body shape is much changed from your appearance as a youth. Imagine the changes that have taken place within your body as well.

Physical activity contributes to good appearance and posture. Strength training exercises improve muscular tone. When abdominal muscles are tightened, you stand more erect. Physical activity helps to maintain desirable body weight by using up calories which otherwise might be stored as body fat.

Physical activity also improves the cardiovascular system. Endurance training improves the efficiency of the heart and decreases the pulse rate.

Engaging in sports and games is fun for anyone of any age. The pleasure and the enjoyment of physical effort contributes in an important measure, to 'joie de vivre', and zest for living.

Relief of mental and emotional tensions and the social pleasures associated with games, sports, or other forms of physical activity are well recognized for their effect on general well-being.

The 'fit' individual can live a more productive life. He can work for greater periods of time without undue fatigue. In addition, he is likely to respond more effectively to emergency situations which may be encountered in everyday life.

## HOW TO ADD ACTIVITY TO EVERYDAY LIVING

There are many ways that you can 'inject' activity into your everyday life without changing into shorts or going near a gym.

Always take the opportunity to use the stairs in your office building whenever you can. Avoid the elevator. You may not be able to walk all the flights the first time but eventually you will.



Don't fight for the parking space nearest the front door of the office building or store. You will be less tense, if you look for a space some distance away, and will find it easier to park. A short, brisk walk to your place of business will set you up for the day.

Even while dressing or undressing, stand rather than sit. While drying yourself after a bath or shower, place the towel behind your neck or back or under your foot and push hard against the towel.

Whenever you can think of it, pull in your stomach, tighten your shoulder and back muscles. It's good for you and you'll look better too.

Don't be pulled along behind your power-driven lawnmower — push one. It may take a little longer but it's good exercise.

## WHAT IS THE 'RIGHT TYPE' OF EXERCISE FOR ADULTS?



The 'exercise' needs of the adult are somewhat different than those of youth. Adults show a progressive deterioration in the efficiency of the heart-lung-blood vessels (the cardio-vascular) system. This is partly due to physical inactivity, for few occupations nowadays make any great demand on the cardio-vascular system. There is some evidence that the heart and blood vessels, which are largely composed of muscle tissue, require exercise as well as other muscles in the body.

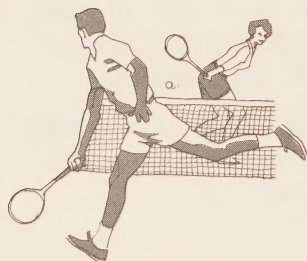
A 'good' exercise, then, would be one which exercises the cardio-vascular system. Walking, jogging — a hike or a run — skating, skiing, bicycling, swimming are all exercises which do just that. If you have enjoyed playing tennis or

squash or have rowed in your younger days, these could be taken up again. All these activities use the larger muscle groups.



Another form of exercise — calisthenics — uses smaller muscle groups and exercises involving the abdominal muscles, such as 'sit-ups' or 'leg lifts' which are generally the most effective to decrease the girth of the waist.

A good 'workout' then would include exercises to warm-up and stretch the muscles. All the major joints should be carried through their full range of movement repeatedly for a period of time sufficiently long for perspiration to begin. Muscular endurance exercises (calisthenics) such as sit-ups, leg lifts, push-ups, back lifts, and side leg raises follow the warm-up and are selected so that all the major muscle groups are called upon to perform work, using some part of the body as the resistance or load. The workout should terminate with some form of walking, jogging, running, chair-stepping, or swimming. The period of time devoted to this last phase should be graded in intensity to suit the individual. The period of activity should gradually be increased in time and intensity. Some form of activity should be performed at least 3 times a week. A 'workout' every day is even better. Consistency and regularity are essential.



Greater enjoyment and benefit can be gained from activity which is performed with one or more people. Involve your whole family in exercise, sports and games.



Exercise can be performed anywhere — at any time. The basic forms of exercise that are beneficial to you are always available.

As an example:

- Pick up the R.C.A.F. 5BX or 10BX booklet and perform those exercises within the confines of your own home.

- Involve your whole family in physical activity — go for a skate, walk, or swim together.
- Pay a visit to the “Y” where adults can enroll in exercise classes. Recreation departments in many towns and cities offer evening adult classes in physical fitness. Qualified physical educators from schools and colleges are employed to conduct these classes.
- If you are financially able, squash, badminton, golf, curling and yachting clubs offer their members an opportunity for enjoyable physical activity.

## HOW MUCH SHOULD I WEIGH?

Before starting an exercise program — seek qualified medical advice on your needs and limitations.



The standard height-weight tables were derived from the measurements of a great number of people. The weights of people of similar heights were averaged and tabulated. You can use these tables of average weight as a guide to determine how much you vary in weight from the average man or woman of your age and height. However, what you actually weigh is not very important. What you really want to know is whether you are too fat. The height-weight tables cannot answer this question for you.

Your gross weight includes the non-fat part of your body such as, your bones, muscles, organs and fluids and that portion which is fat. The non-fat part will not change very much after you have fully grown, but the amount of fat you have at any one time can change a great deal. Since you cannot alter the weight of the fat-free part of your body the question is to decide how much fat you should have to look and feel your best, to provide the needed storage of energy and to insulate your body.

The amount of fat you have can be measured with special calipers designed for this purpose. The thickness of the pinch folds of fat around the abdomen can tell whether you have too much fat. A quick and easy measurement that you can make yourself is to take a double pinch fold of skin and fat between your thumb and forefinger at your navel. If the thickness is over an inch, you are too fat.

A simple yet effective guide to what you should weigh is to recall what you did weigh in your early twenties. Changes in your weight today from your 'best' weight at that time, more than likely is an accumulation of fat. You should weigh what you did then, as nearly as possible.

## DISADVANTAGES OF TOO MUCH BODY FAT

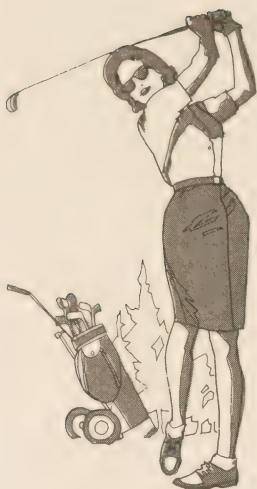
An over-abundance of fat imposes upon the individual physical limitations, discomfort and the penalty of unattractiveness. The extra weight acts as a mechanical burden to efficient physical performance, and there is considerable evidence that obese individuals are more subject to heart, blood vessel and kidney deterioration than people of normal weight.

## THE ROLE OF EXERCISE IN FAT REDUCTION

Physical activity has been much neglected as a means of weight reduction. Actually, it is an important factor in a sensible weight reduction or weight maintenance programme. The other is diet.

It is a generally held opinion that a diet restricted in high calorie foods is the simplest and most effective means to weight reduction. Drastic food restriction appeals to people because of the immediately noticeable effects. Individuals who restrict their intake to 1200 calories or below must be especially careful because of the danger of inadequate intake of necessary vitamins and minerals.





In addition, a large number of individuals report unfavourable emotional responses while on severe weight reduction diets.

'Crash' dieting, unless under medical supervision, is (usually nutritionally) unsound, often physically weakening and may be emotionally upsetting. Most individuals revert to their normal eating habits within weeks or months and begin once again to accumulate body fat and put on weight.

The addition of physical activity to one's daily living provides for a long term, sustained and sensible approach to weight reduction. It is inexpensive; it is simple, and there is the further benefit of general improvement in health.

A short, brisk, 15 minute walk each day will burn up a pound of fat in a month — 12 pounds in a year. In addition, the walk will strengthen leg muscles and improve the cardiac and respiratory systems.

Exercises and activities of the type discussed on previous pages of this booklet, should be used freely in a programme of weight reduction.

## EXERCISE AND HEART DISEASE



There is some evidence to suggest that men in occupations requiring a good deal of physical activity may have a lower death rate from coronary heart disease than those in sedentary occupations. Regular vigorous exercise may actually prevent heart disease by increasing the blood supply to the heart muscle and decreasing the amount of cholesterol deposited to plug the coronary arteries. And, as we have stated, exercise helps to combat overweight which is often associated with coronary disease.

Farmers and labourers have a lower death rate from coronary disease than business executives, and postmen lower than clerks. In addition, the sedentary occupations usually require a greater degree of mental activity, anxiety and stress, which may contribute further to this problem.

To place exercise in its proper perspective it must be realized that heredity, nutrition and unknown factors all have a part to play in heart disease.

The healthy heart, which is a specialized and important muscle, responds to activity just as other muscles in the body. The proper amount and type of exercise is beneficial and actually improves its function. It becomes more efficient and the circulation improves. It is better able to withstand physical and possibly mental stress.

Can a man who has had a heart attack come back? The answer is yes. A heart attack, for most persons, leaves no permanent disability. Recent studies show that over 85% can and do return to work, after the heart has healed from an attack. Exercises of gradually increasing intensity are prescribed by heart specialists. One can be more fit after an attack than before. However, it is wise to consult your personal physician before undertaking such a programme of activity. Have a check-up and, if found fit, give your heart a break — exercise intelligently.

## EXERCISE AND AGING

A gradual slowing in physical performance occurs with increasing age. The reason for this is not too clear at present. Inactivity speeds up this slowing of physical performance; and people tend to accept old age prematurely. Exercises and sports which tax wind and muscle can be continued well into advancing years. Milder forms of exercise, such as walking or gardening keep joints limber and muscles in good tone.

With the additional years that science is making possible for man, it is most important that exercise not be neglected as age increases. The key to successful retirement is continued activity. It has been said that when a man retires out of life, life retires out of him. To keep physically and mentally fit, physical activity is essential.

## A WORD OF ADVICE TO THE LADIES



The contribution of exercise to figure improvement is of particular concern to women. Exercise can help to control body fatness at the same time as it firms flabby muscles. The circumference of the waist, for instance, gets smaller if the abdominal muscles are exercised. Endurance exercises decrease the body fat throughout the body. The reduction of fat thickness at selected sites cannot be accomplished by localized exercises of the muscles at or near these sites. In other words, 'spot reduction' of fat is of little use.

The principles of exercise apply to men and women alike. Exercise activity should be sufficiently taxing, regularly performed, and progressive in intensity for worthwhile results. The choice of the form of exercise depends upon the purposes sought. Women need not be overly concerned that they will develop big muscles since even men who undertake a long-term, intensive programme of weight lifting for strength improvement often find it extremely difficult to increase the size of their muscles.

A minimal daily exercise programme for women should include exercises for the abdominal area (leg lifts or sit-ups) and a brisk, 15 minute, walk. The benefits accruing from these two exercises are not normally included in a woman's working day. Getting out of the house could be psychologically beneficial as well.

Sports activities such as swimming, tennis, skating and skiing have lifelong fitness values and are worthy of consideration for you and your daughter.

# QUESTIONS FREQUENTLY ASKED ABOUT PHYSICAL FITNESS

## CAN YOU STRAIN YOUR HEART BY TOO MUCH EXERCISE?

The healthy human heart is not damaged by strenuous exercise. The heart, free from disease, can adequately perform the tasks demanded of it. Progressive endurance activities can improve heart function. The application of this principle makes the heart stronger, and usually lowers the heart rate.

Medically prescribed graduated exercises are being used by some patients recovering from heart attacks.

## WHAT IS THE BEST TIME TO EXERCISE?

Whenever you can make the time. Many men find it most convenient to exercise in the late afternoon after work. Exercise followed by a refreshing shower is much better than the tensions of fighting rush hour traffic. You can arrive home more relaxed and with a hearty appetite. Others find that a physical workout at noon makes them feel more alert and allows them to work more efficiently the rest of the day. They also find that they eat lighter lunches which is doubly good for weight control. The only time that we suggest you do not exercise vigorously is immediately following your meals.

## HOW MUCH DO VIBRATORS HELP IN FAT LOSS?

None at all. Research has shown that the average woman would have to be shaken for 500 hours to lose one pound of fat. There is no mechanical way that fat can be pounded, slapped or shaken to redistribute it or to lose it. If the body takes in food and it is not used in the function of the body, then it is stored as fat. The fat is mobilized chemically from the storage depots as it is needed for muscular work.

## WHAT GOOD IS A STEAM BATH?

All forms of hot baths, dry or wet, increase your body temperature. Because of this high body temperature you perspire and lose body water. A two or three pound loss is common with a 15 minute bath. Football players often lose 6 to 10 pounds or more during a game in warm weather. The weight loss is temporary and you will recover the loss at your next meal. Hot baths do not 'melt' away any fat. Some men claim that these baths help them to relax.

## HOW DO YOU MEASURE PHYSICAL FITNESS?

No simple methods have yet been developed for measuring a person's physical fitness. However, the following three factors have been used as a guide:

- (1) The quality of body movement or motor fitness — as measured by flexibility, agility, strength, power, endurance, co-ordination, speed and accuracy.
- (2) The exterior dimensions and state of the body or physique — as determined by body size, or dimension (height, weight, chest width), body type (linear, muscular or stocky build), body posture, and body fat.
- (3) The organic functional state of the body — as determined by the ability of the individual to undergo endurance such as in running or swimming a mile.

## GRADING OF PHYSICAL ACTIVITY

The following sports and recreational activities have been graded in three major categories, (1) vigorous (2) moderately vigorous and (3) recreational, on the basis of their performance intensity (x). Almost any one of these activities may be performed by anyone, depending upon the individual's preparation and experience in the activity. A general guide on the basis of age would be to leave the vigorous activities to those under 40 years of age; the moderately vigorous activities to those under 50 years of age, and the recreational activities can be engaged in at any age. Have your doctor check off those activities in which *you* may engage.

Sport or Activity	Vig.	Mod. Vig.	Rec.	Sport or Activity	Vig.	Mod. Vig.	Rec.
1. Archery			x	24. Jogging		x	
2. Badminton		x		25. Lawn Bowling			x
3. Basketball	x			26. Quoits			x
4. Bicycling		x		27. Roller Skating		x	
5. Billiards			x	28. Rowing		x	
6. Bowling			x	29. Sailing		x	
7. Camping		x		30. Shooting			x
8. Canoe Tripping		x		31. Shuffleboard			x
9. Crafts			x	32. Skating		x	
10. Cricket		x		33. Skiing		x	
11. Cross Country Running	x			34. Soccer	x		
12. Curling			x	35. Social Dancing			x
13. Dart Playing			x	36. Softball		x	
14. Diving	x			37. Square Dancing		x	
15. Fencing		x		38. Swimming	x		
16. Field Hockey	x			39. Tennis	x		
17. Fishing			x	40. Tobogganing		x	
18. Football	x			41. Touch Football		x	
19. Gardening			x	42. Volleyball		x	
20. Golf			x	43. Walking			x
21. Hockey	x			44. Water Polo	x		
22. Horseshoe Pitching			x	45. Weight Training	x		
23. Hunting		x		46. Wrestling	x		



A REGULAR PROGRAM...



OF EXERCISE OR SPORT...



WILL HELP YOU...



GET FIT - KEEP FIT

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